

## Appendix Summary

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### Part 1: Part 1: Important to Know

#### Appendix 1: 5G is NOT needed for Autonomous Cars

**Engineer Bill Bathgate (2018) – In a *Letter to MI State legislators from an engineer for FCA(Fiat-Chrysler) working on telecommunications systems of autonomous vehicles explaining - 5G is NOT needed for Driverless Cars (contrary to the wireless industry's claims)***

**Explanation:** Engineer Bill Bathgate is an electrical engineer from Michigan. His impressive CV includes working for HP, IBM and FCA. Until January 2018 he worked in a key role in the telecommunications systems of autonomous vehicles. In his letter he refutes the claim that 5G is a necessary part of autonomous vehicles and calls legislators to vote NO on SB637. SB637 is a bill written by the wireless industry using its power and money for the biggest power grab of our public rights of way in history. The bill unreasonably and against basic principles of our political system gives unlimited power and control to a greedy and fraudulent industry while outrageously stripping away the rights of the public and of municipalities.

#### Appendix 2: March 2018: Government Study Provides Clear Evidence: Wireless Radiation Causes Cancer & DNA Damage

**National Toxicology Program Study (2018) – WATE Summary explains the history of the study and the findings.** . To read more about the NTP study we recommend **SaferEMR.com**: (1) [National Toxicology Program Finds Cell Phone Radiation Causes Cancer](#). (2) [NTP: Not the First Govt. Study to Find Wireless Radiation Can Cause Cancer in Lab Rats](#). **Links to the page of the NTP Study:** (1) [The Final Report of the Expert Panel](#) (2) [The page about the panel at the NTP's website](#)

**Explanation:** The Federal Government's National Toxicology Program ('NTP'), a \$25 million, 14-year study was designed to provide a final answer whether or not wireless radiation is harmful. **The study confirmed that wireless radiation indeed causes cancer and DNA damage at non-thermal levels, below the FCC "safety" limits** (which deny non-thermal effects). Dr. Ron Melnik, PhD, Senior Toxicologist and Director of Special Programs in the (NIEHS) who led the study until he retired, said: **"The NTP tested the hypothesis that cell phone radiation could not cause health effects and that hypothesis has now been disproved. The experiment has been done and, after extensive reviews, the consensus is that there was a carcinogenic effect."** In regard to the DNA damage he said that the results of the study: **"should put to rest the old argument that RF radiation cannot cause DNA damage"**. The scientists in the press conference in 2016 said that **"the public must be warned"**. On March 26, 2018, a peer review panel of 11 experts appointed by the NIEHS to review the [cancer findings](#) confirmed that the study shows **"CLEAR EVIDENCE"** of cancer. **WATE's Comments:** The study showed nothing new merely repeated what numerous other studies already proved. For example, 49 studies including human studies showed that this radiation breaks the DNA. Considering the findings of this study, our legislators should be passing legislation to warn the public and limit wireless exposure NOT pass 5G legislation that will give the wireless industry unlimited power to force cell towers anywhere without control. The results of another big study, a 6 million Euro study by the respected Ramazzini Institute in Italy confirmed the findings of the NTP – it is the same type of study with the main difference that the levels of radiation that was used was 15 to 6,000 times lower. Nevertheless the finding confirmed the NTP results of Schwannoma type cancers. Read More: [Ramazzini Institute Cell Phone Radiation Study Replicates NTP Study](#)

Appendix 3: **'The Nation' Investigation: How Big Wireless Defrauded The Public**

**The Nation (March 2018) – "How Big Wireless Made Us Think That Cell Phones Are Safe: A Special Investigation"** and the subtitle: **The disinformation campaign—and massive radiation increase - behind the 5G rollout."**

**Explanation:** The title of the article speaks for itself. [Finally the story of what is likely the biggest fraud of our time got headlines](#). The wireless industry has been following the tobacco industry fraud and perfected it. The article discusses the small part of the fraud but it is sufficient to establish that we should not continue and believe this fraudulent industry and the [FCC- the Telecom's Industry's captured agency](#). The article was written by two of our leading investigative journalists - Mark Hertzgaard and Mark Dowie. Dowie is a former publisher and editor of

Mother Jones magazine and known for his investigative journalist work. He has won nineteen journalism awards. Despite its importance, the article was not covered much by the media – for obvious reasons, the wireless industry control and influence of the media – whether because of advertising power or because it actually owns the media. Amy Goodman from 'Democracy Now' interviewed Hertzgaard: "How the Wireless Industry Convinced the Public Cellphones Are Safe & Cherry-Picked Research on Risks". As the article's subtitle suggests – it makes no sense to allow 5G before exploring the fraud and sickness further and 5G therefore should definitely not be fast-tracked.

Appendix 4: 5G Appeal – Over 200 Scientists Calling for Moratorium on 5G

**5G Appeal – Appeal by over 200 scientists calling for moratorium on 5G because of serious harms of wireless radiation and a pan-demic of sickness that already exists and needs to be addressed.**

**Explanation:** In September 2017, 190 scientists and experts on wireless radiation health effects signed an Appeal calling for a moratorium on 5G because of serious and existing harms (additional signatories joined the Appeal and now more than 200 scientists have signed). They wrote that **the adverse health effects from wireless radiation are: "...proven to be harmful to humans and the environment..."** *Effects include increased cancer risk; cellular stress, increase in harmful free radicals, genetic damage, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on the general well-being in humans. Damage goes well beyond the human race, as there is growing evidence of harmful effects to both plant and animal life.* Science aims to warn us of potential harms; yet, we have been ignoring the science for decades. We believe a fraudulent industry and the corrupt FCC and now, what science has warned us of has manifested. The scientists conclude: **"... Inaction is a cost to society and is not an option anymore... we unanimously acknowledge this serious hazard to public health...that major primary prevention measures are adopted and prioritized, to face this worldwide pan-epidemic..."**. WATE's comments: There is a complete loss of common sense that our decision makers are choosing to believe the wireless industry funded studies rather than to non-industry funded scientists including our top scientists from our top universities. After what happened with tobacco, Asbestos and many chemicals, we should have known better. There is no real dispute as to wireless harms. The harms are established with conclusive scientific and human evidence. The rest is a manufactured dispute by a fraudulent industry.

Appendix 5: California Firefighters Got Sick From Cell Towers - Got Exclusion from 5G

**Foster (2017) - "The Firefighters Wake Up Call To Us All" By Susan Foster RE: SB 649 Opposing Cell Towers In Rights Of Way"**

**Explanation:** Following lobbying efforts of the Firefighters' strong union, the 5G Bill in California (SB649) included an exemption for firefighters from forced 5G antennas because of health effects. California firefighters have long complained of often disabling symptoms from cell towers on their stations. A 2004 SPECT brain scan study of firefighters in California found brain abnormalities in all those who were tested. Tests showed they also had delayed reaction times, lack of impulse control and cognitive impairment, and experienced other common symptoms of sickness from wireless radiation including sleep disturbances, headaches and memory loss. These symptoms appeared following the installation of a tower adjacent to their station five years earlier. As a result, in 2005 The International Firefighters Association recognized wireless microwave radiation health effects and passed a resolution against locating cell towers on top of their fire stations. The document states that firefighters should not be exposed unless "it is proven that such sitings are not hazardous to the health of our members" and states numerous health effects that have been found to be caused by wireless radiation. A 2015 California Bill also included exemption for firefighters. The exemption is an admission of harm on the part of the legislators and the question is – **if strong firefighters are afforded protection why similar protection is not afforded to others including children and families living nearby the same cell towers?** Additional Links: (1) Watch the President, Los Angeles County Firefighter's Union Opposition for Cell Towers. (2) Watch a Program About Sickness of Firefighters from Cell Towers.

#### Appendix 6: MI Father Testimony about the Sickness of his Daughter from Wireless

**How the Fisher family discovered that wireless radiation and Wi-Fi have been causing their daughter's sickness.**

**Explanation:** This is a heartbreaking testimony of a father who is a truck driver, about what he, his wife and their daughter have been through until they discovered that their daughter's sickness is caused by exposure to wireless radiation including from Wi-Fi. WATE is in touch with hundreds of people in Michigan who have become sick from wireless radiation with neurological effects known as Microwave Sickness. Unlike the wireless industry's cruel campaign suggests, the condition is established and is the most widespread manifestation of wireless harms with at least 10% of the population already suffering from it. Unfortunately many children are affected and many are being misdiagnosed, get the wrong treatment and those who understand what is harming them are being cruelly ignored and sometime mocked by an ignorant system.

## Part 2: What is 5G – Internet of Things; Economic Viability; Data is the New Oil; Health Effects; Privacy Issues;

**5G is about getting our data while violating our privacy rights and selling. Data is the new oil.** While until now we were buying wireless products, with 5G, **WE ARE THE PRODUCT**. 5G is not a technology but a concept, an infrastructure to what is known as the '*Internet of Things*'. While 1G, 2G, 3G, 4G were about connecting people, 5G is about connecting things. The wireless industry got to saturation in making profits – there is no market for new subscribers and it is looking for ways to make money.

Stealing the public's data from our use of 'things' and selling it is the driving force of 5G. The wireless industry has been lying as to what 5G is really about. It sells a different story to different audiences. For example in Michigan it claims it is needed for autonomous cars although it is untrue. To states with large rural areas with no wireless reception it says it will help bring wireless although it is clearly not true as 5G requires an extremely expensive infrastructure that may not be even worthwhile for cities. To the public it states it is about reducing the download speeds from 8 seconds to 4 seconds – clearly reduction of download speeds will not pay for \$200 billion a year in infrastructure.

5G means having a Microwave radiation transmitting antenna in our things (alleged 'Smart' Appliances) and thereby increasing our exposure to intense radiation in our home exponentially. Further, until now, wireless technology used the lower frequencies of the Microwave frequencies. 5G will also utilize higher Microwave frequencies, also known as 'Extremely High Frequencies' or 'Millimeter Waves' (because there are about 30 billion oscillations per second, the distance between the oscillations is in millimeters). These frequencies were chosen because the increased amount of data requires higher frequencies that have bigger bandwidth. But these frequencies are also easily obstructed by the environment, weather etc. For these reasons a massive and expensive infrastructure is required which means a cell tower antenna on every pole transmitting directly into our second floor bedrooms and into our homes and streets. Without legislation that will allow the wireless industry cheap and easy access to our public rights of way, the costs of 5G infrastructure will be too high.

The wireless industry opened and funded NYU (New York University) Wireless – a new department at the university to promote 5G. Physicists from the department published a ridiculous paper titled '*5G is safe for generations*' claiming that millimeter waves are safe because they interact mainly with the skin and do not penetrate deep into the body. The physicists ignore the simple fact that our skin is the largest organ of the body and consists of an elaborate system of nerves and cells. The NYU physicists' claims are not surprising; after all they are paid by the wireless industry and they are physicists, not bio-medical scientists that understand how the body works.

How can a radiation which is trillion times higher than what our bodies evolved to tolerate can be safe? Our brain is electric. Our heart is electric. Our nervous system is electric. Our cells communicate electrically. It is not maybe harmful, it is without a doubt harmful; how can it not?

**The problems that will be created by 5G are various and numerous. A good resource to learn more about the various issues associated with 5G including Health, Privacy, Cyber Security, Energy, Environmental and others is the website: [WhatIs5G.info](http://WhatIs5G.info). It is time we invest in creating safer technologies that do not increase our exposure to microwave radiation and actually decrease it. We have been taking the wrong path when it comes to wireless technology in the past 20 years. Taking the 5G path is something we cannot afford. What is technologically possible is not always biologically sensible.**

**Appendix 7: Milimeter wave Frequencies Are Making the Body Into an Antenna**

**Feldman (2007)- "*Human Skin As Arrays of Helical Antennas in the Millimeter and Submillimeter Wave Range*"**

**Explanation:** A study from the Hebrew University in Israel, the university which is the beneficiary of the royalties from the Albert Einstein's estate, shows that Millimeter Waves, which are the frequencies intended to be used for 5G technology, interact with the sweat nodes in our body and make the body into a huge antenna.

**Appendix 8: An Overview Article About 5G and Its Harms**

**Dr. Cindy Russell (2017) – "*A 5G Wireless Future – Will It Give Us a Smart Nation or Contribute to an Unhealthy One?*"**

**Explanation:** An overview of the science on wireless technology harms including a review of the problems associated with the advent of 5G deployment. The article refers to studies that were done on some of the frequencies that will be used for 5G and show severe adverse health effects including arrhythmia, heart rate variability, effects on the development of embryos, effects on antibiotic resistance, among other effects. The article includes over 180 references on the harms of wireless technology. **Dr. Cindy Russell** is part of '*Physicians for Safe Technology*', and an active member of the California Medical Association House of Delegates and has authored and passed many resolutions regarding toxic exposures and environmental health. She is a co-author of California Medical Association Resolution 107-14 which was passed in December of 2014 that resolved that "*CMA support efforts to implement new safety exposure limits for wireless devices to levels that do not cause human or environmental harm based on scientific research.*"

**Appendix 9: Air-Force & Army Studies Review Shows Harm From 5G Frequencies**

**Pakhomov (1998) - US Army & Air Force Report on 5G Health Effects – "Current State and Implications of Research on Biological Effects of Millimeter Waves: A Review of Literature"**

**Explanation:** U.S. Army Medical Research & US Air Force Research Laboratory Summary Report on the biological effects of Millimeter Wave Frequencies (MMW) – the effects of the same frequencies that will be used for 5G. The paper, which was published in 1998, summarizes 300 studies of biological effects of millimeter waves, including approximately 50 studies on non-thermal levels – the levels which are used for wireless devices. The review indicates numerous effects of MMW (5G frequencies) on biological systems. The report concludes: *"The studies reviewed demonstrated effects of low-intensity MMW (10 mW/cm<sup>2</sup> and less) on cell growth and proliferation, activity of enzymes, state of cell genetic apparatus, function of excitable membranes, peripheral receptors, and other biological systems.* The research showed mixed effects – some showed regenerative effects while others showed adverse effects which is not surprising as anything that has biological effects may have both adverse and beneficial effects, depending on frequency, power and exposure time. Whether the effects are good or bad – it cannot be claimed as FCC claims and wireless industry mercenaries claim that there is no evidence of non-thermal bio-effects and therefore the technology is safe.

**Appendix 10: Bloomberg : 5G Infrastructure Makes No Financial Sense**

**Bloomberg Article (Dec 2017) – "Upgrade to 5G Costs \$200 Billion a Year; May Not Be Worth It."**

**Explanation:** The article claims that the industry's ability to make money from current wireless technology is at saturation and it is desperately looking for new ways to make money. 5G is an UNKNOWN. The industry is essentially artificially creating a false hype for 5G, telling a incoherent story about why it is good while not really knowing what it is and how it will create profit. **Our Question:** *Does it make sense to give the wireless industry unlimited control to our public rights of way so it will be easier for it to make more money from our data while we, the public and municipalities pay for the infrastructure and the harms?*

**Appendix 11: Mckinsey Report – 5G & Internet of Things is about Making Money From Our Data**

**McKinsey Global Institute Report (2015) – "The Internet of Things: Mapping The Value Beyond The Hype"**

**Explanation:** 5G is really the DATA. Data is the new oil. The report elaborates the potential revenues that will be generated from 5G and the Internet of Things. The revenues from data collection are estimated to be \$11 trillion a year as of 2025. Of course all of the potential financial benefits are based on industry presentations (or misrepresentations). **WATE's Comment:** The report ignores the health care costs

and the loss of work force created by the extremely high levels of radiation. Especially ridiculous is the health-care systems use. For example, putting a transmitting device on a patient with a heart issue to collect data about his activity levels, to make sure he is active enough while the device itself may be causing the heart issues in the first place and will continued heart problems.

### **Part 3: Effects of Cell Towers & Radars**

Since 5G is about putting up cell towers - high intensity microwave transmitting antennas will be placed on probably every utility and light pole on our streets and in front of our homes. The studies which were done on exposure to cell towers should be examined. There is conclusive evidence, scientific and epidemiological of the multiple adverse health effects from cell towers (and Wi-Fi) – from chronic, all body exposure, to non-thermal levels of Radio-Frequency/Microwave Radiation. While a cell phone may be turned off, the radiation from cell towers cannot be turned off.

#### **Appendix 12: Studies Review: Cell Towers & Radars Cause & Aggravate Cancer**

***Yakymenko et al (2011) - Long-Term Exposure to Microwave Radiation Provokes Cancer Growth: Evidences From Radars and Mobile Communication Systems***

**Explanation:** This meta-analysis paper is a summary of studies including studies on pilots, police officers and Air-Force studies that show that wireless radiation from cell towers and radars cause cancer and aggravate growing cancers. Studies show that even one year of living near a cell tower can dramatically increase cancer incidents. Some studies showed for example 5.5-14 times higher rates of Leukemia among those who were exposed to radars. *The authors conclude that safety limits based on thermal effects are incorrect and need to be urgently re-evaluated.*

#### **Appendix 13: Neurological Effects from Cell Towers**

***Gomez-Perretta et al (2013) - Subjective Symptoms Related to GSM Radiation From Mobile Phone Base Stations: a Cross-Sectional Study***

**Explanation:** Many studies have shown that radiation from cell towers is causing various neurological effects to those living nearby, especially within 400 yards. This study is one example of a correlation between adverse symptoms and exposure from mobile phone base stations. Symptoms include lack of appetite, lack of concentration, irritability and trouble sleeping.

### **Part 4: Examples of Effects and Sickness from Wireless Radiation**

#### **Appendix 14: Navy Report Shows Evidence of Harm Before Commercialization of Cell Phones**



**US Navy Report (1971) – *Bibliography of Reported Biological Phenomena ('Effects') and Clinical Manifestations Attributed to Microwave and Radio-Frequency Radiation***

**Explanation:** While we are being told that there is no evidence that microwave frequencies radiation is harmful, in the 50s and 60s soldiers in the Navy who were working with radars which emit non-thermal levels of Microwave radiation like wireless technology, started to develop various neurological symptoms (now called Microwave Sickness). The Navy brought a scientist, Dr. Zuri Glaser to collect scientific evidence whether microwave radiation may be harmful. In 1971, after 10 years of collecting the data, he published his first report - The report includes **2310 studies showing numerous adverse health effects caused by microwave radiation**. In Pages 7-12 the report elaborates the numerous adverse effects found including damage to the nervous, vascular and metabolic systems as well as psychological and behavioral problems. The report established microwave radiation as extremely harmful to humans well before the commercialization of cell phones. Dr. Glaser updated his report in 1976 and it included 3,700 studies and in 1984, the year we commercialized cell phones, it had over 5,000 studies. So while the wireless industry is misleading the public to believe that there is no evidence of harm, when we commercialized cell phones we already had thousands of studies and human evidence.

**Appendix 15: Wireless Radiation Breaks the Blood Brain Barrier**

**Frey (1975) – *Neural Function and Behavior: Defining the Relationship***

**Explanation:** Navy Scientist Dr. Alan Frey conducted the first study that showed that non-thermal levels (called "low intensity") of Microwave radiation can break the Blood Brain Barrier (BBB). His study also showed that: adverse behavioral effects are caused mainly by the modulation rather than by the carrier wave. The BBB is a mechanism in our body that protects the brain and preventing from toxins to get to our brain through the blood stream. The findings of the breakage of the BBB were confirmed by dozens of additional studies. Further, the Swedish brain-surgeon and neuro-scientist Dr. Lai Salford's own study not only confirmed Frey's findings, but he also actually used this wireless radiation to break the BBB of his patients with brain tumors to get chemotherapy to their brain (chemotherapy is a toxin and the BBB will prevent it from getting to the brain unless the BBB will be broken) so there is no doubt that wireless radiation can break the BBB. Study by Prof. Belpomme from France on 700 people with Microwave Sickness from wireless radiation showed that 30% of them had a broken BBB. Broken BBB can lead to many adverse health problems including headaches, brain fog and severe brain damage including Alzheimer and other brain degenerative conditions.

**Appendix 16: Wireless Radiation Can Cause Bio-Effects Within Minutes of Exposure**

### **BioInitiative Report (2012) – Conclusion**

**Explanation:** The BioInitiative report is the most comprehensive review of studies on biological effects caused by EMFs. It was prepared by 30 world-leading scientists and public health professionals. The authors reviewed 3000 studies on the issue of EMFs. In their conclusion they write: *"Bio-effects can also occur from just minutes of exposure to mobile phone masts (cell towers), Wi-Fi, and wireless utility 'smart' meters that produce whole-body exposure."*

### **Appendix 17: BioInitiative Report (2012) - Sample Table of Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure**

**Explanation:** The BioInitiative Group created a color-coded sample table highlighting 50 (out of the thousands) of studies reporting biological effects from radiofrequency radiation at low intensity exposures. The table is arranged by intensity of radiation and color coded by types of harm.

### **Appendix 18: Wireless Radiation Causes Oxidative Stress – An Established Mechanism of Harm**

#### ***Yakymenko (2015) - Oxidative Mechanisms of Biological Activity of Low-Intensity Radiofrequency Radiation***

**Explanation:** The industry has been misleading the public, regulating agencies, and Congress to believe that there is no mechanism by which wireless technology radiation (which uses non-thermal levels of microwave radiation) can cause biological effects. This paper proves that a mechanism of harm does exist. Oxidative Stress is a well-established mechanism that leads to cancer, non-cancerous conditions and DNA damage. This Meta-Analysis study highlights 93 out of 100 studies that show oxidative stress caused by wireless technology radiation, thereby conclusively establishing that a mechanism does exist and that FCC guidelines are incorrect. In fact, the Bio-Initiative Report provides data indicating that actually 200 studies were done on whether wireless radiation can cause oxidative stress and 180 of them, i.e. 90% of studies show oxidative stress. Oxidative Stress is involved in cancer, Autism, Alzheimer and other conditions.

### **Appendix 19: Wireless Radiation Causes Alzheimer, Cancer & Aggravates Existing Cancer**

#### ***Barnes et al (2016) – Some Effects of Weak Magnetic Fields on Biological Systems - IEEE Power Electronic Magazine***

**Explanation:** The FCC guidelines deny any non-thermal biological effects of wireless technology radiation and are based also on IEEE (Institute of Electrical and Electronics Engineers) recommendations. IEEE is the largest professional organization of engineers. When the IEEE guidelines were adopted in 1996, the health agencies argued that relying on an engineer organization for

recommendation on issues concerning biological effects is absurdity. Furthermore, senior IEEE members admit serious biological harms, by their own studies. In 2017, Prof. Frank Barnes, a professor emeritus at the University of Colorado, Boulder, study shows that this radiation is causing changes in growth rates of cancer cells, changes in chemical reaction rates, and increases in free radical concentrations leading to cancers and Alzheimer's. His paper is important because he is a Fellow of the IEEE and the American Association for the Advancement of Science and has served as vice president, Publication Activities of the IEEE and as the chair of the IEEE Electron Devices Society.

Appendix 20: **NIH Study Proves Bio-Effects of Wireless Radiation on the Brain**

**National Institute of Health (NIH) Study - Volkow (2011)- *Effects of Cell Phone Radiofrequency Signal Exposure on Brain Glucose Metabolism***

**Explanation:** Brain scans on 47 people showed conclusively that cell phone radiation caused an increase in the levels of glucose metabolism in the brain. Glucose is the food of the brain. Contrary to FCC assertions, this study conclusively proves biological effects of cell phone radiation. An image from the study appears in the color handout you received in the presentation.

Appendix 21: **Microwave Sickness / Electrosensitivity – Diagnosis Guidelines**

**Belyaev et al (2016) - *EUROPAEM EMF Guideline 2016 For the Prevention, Diagnosis and Treatment of EMF-Related Health Problems and Illnesses***

**Explanation:** Microwave Sickness is the more accurate name for electro-sensitivity. It is the most widespread manifestation of illness from wireless radiation with mainly neurological symptoms. At least 10% of the population has already developed the condition; the rates are likely much higher. Although the condition was established and recognized including by the government and courts, there is a cruel campaign by the wireless industry to suggest it is a psychological condition. The wireless industry has been funding ridiculous provocation studies which are a scientific disgrace. There are hundreds of studies proving Microwave Sickness and its correlation to exposure to exposure to EMF/EMR. In 2016, the EMF working group of the EUROPAEM, the European Academy for Environmental Medicine (EUROPAEM) published guidelines, which include a review of the science of Electro-Sensitivity and instructions for doctors on how to diagnose and treat ES.

Appendix 22: **Wireless Radiation Responsible for Reduction in Quality of Sperm**

**Zilberlicht (2015) – *"Habits of cell phone usage and sperm quality - does it warrant attention?"***

**Explanation:** The adverse effects of wireless technology radiation on sperm and fertility are established. Numerous studies including experimental research, epidemiological studies, in vitro (cell) and in vivo (animal) studies have established that radiation emitted from wireless devices harms sperm. The proven harms include reduced sperm counts, motility, viability and concentration. It also changes the structure and causes irreparable damage to the sperms' DNA. These studies have been confirmed by data collected from around the world. Data presented in the 2013 conference of the European Society of Human Reproduction and Embryology showed that, over the past 15 years, the sperm count of men aged 18 to 25 has dropped significantly. For example According to a 2016 study conducted on 106 males by the Technion (Israel Institute of Technology which is the Israeli equivalent of MIT) and the Carmel Medical Center, the rate of defective sperm of men who did not put a cell phone in their pockets was 11%. The rate of men with defective sperm who did put their cell phones in their pockets was 47%.

#### Appendix 23: Wireless Radiation & Autism

##### **Herbert (2013) - *Autism and EMF? Plausibility of a pathophysiological link – Part I and Part II***

**Explanation:** Professor Martha Herbert, MD, PhD from Harvard University is a Pediatric Neurologist, Neuroscientist specialist in neuro-developmental disorders and known for her work on Autism. In 2013, Dr. Herbert examined the potential link between wireless technology and autism taking into consideration that the main environmental change in the past 10 years has been exposure to wireless radiation. The number of children who suffer from Autism has increased exponentially; it has tripled in the past 10 years. 1 in 59 children has Autism. Prof. Herbert expected to write a paper of modest length but found much more scientific literature than she expected, and ended up publishing a 60 page paper which was divided to two parts with over 550 scientific references. She concluded that a correlation between wireless radiation and autism is possible. Since Dr. Herbert's examination of the topic of Autism, Neurological symptoms and the correlation to EMFs, she has become an avid advocate on the issue of the harms of wireless technology radiation and objects to the installation of Wi-Fi in schools.

#### Appendix 24: Removing Wireless Improved Autistic Child – A Mother's Testimony

##### **A testimony of a mother from Colorado.**

On May 20 a mother of an autistic child posted on the Facebook Group EMF & Autism about the improvement of her autistic son after removing wireless and moving to a house rather than being in a wireless saturated apartment building. She wrote: ***"My kid who hates writing...almost 2 months after moving away from smart meters, 30+ wifis, direct neighbor with a hot spot and his progress is***

**astounding. Wouldn't even hold a pen before. Loves writing now. Unreal. EMFs are the worst. Healing is beautiful!!".** Following her posting she provided *We Are The Evidence* a full testimony and pictures of her son writing on walls.

**Appendix 25: Learning and Behavioral Difficulties from Wi-Fi in Schools**

**Professor Martha Herbert letter to Los Angeles Unified School District (2013) – Objecting the Installation of Wi-Fi in Schools.**

**Explanation:** Since Professor Martha Herbert's examination of the topic of correlation of Autism and wireless radiation and reviewed the extensive scientific evidence of the harms of wireless radiation, she is convinced of the harms of non-thermal levels of Microwave Radiation / wireless radiation and objects to the installation of Wi-Fi in schools.

**Appendix 26: Wireless Radiation Causes ADHD & Behavioral Problems**

**ADHD - Taylor (2012) - *Fetal Radiofrequency Radiation Exposure From 800-1900 Mhz-Rated Cellular Telephones Affects Neuro-development and Behavior in Mice***

**Explanation:** Prof. Hugh Taylor, a Yale University Professor & Chair of Obstetrics, Gynecology, and Reproductive Sciences, established in his research that mice fetal exposure to wireless radiation affects neuro-development and behavior and can lead to ADHD. Press [HERE](#) for Prof. Taylor video presentation. The number of children who suffer from ADHD (Attention Deficit Hyperactivity Disorder) has doubled in the past 10 years. The human evidence confirms the findings. A recent paper which summarizes 5 epidemiological studies of a total of 83,000 women, showed a correlation between exposures of pregnant women to wireless radiation to higher hyperactivity/attention problems with the children. The paper: "[Maternal cell phone use during pregnancy and child behavioral problems in five birth cohorts.](#)"

**Appendix 27: Wireless Radiation Adversely Affects Bees & Birds**

**Ulrich Warnke (2009) - *BEES, BIRDS AND MANKIND - Destroying Nature by 'Electrosmog'***

**Explanation:** A report by world leading scientists from Germany on the devastating effects of wireless technology on the environment including bees and birds. Wireless radiation is the cause for the bees' colony collapse. This is why it is happening worldwide. This is not surprising. Bees are navigating using EMFs and communicating based on vibrations. This radiation interferes with these abilities. When I was in a rally in DC, a man stopped by and I approached him. He told me he is aware of the topic as he is a CEO of a wireless company. In his past he used to manage a company that installed cell towers. He told me that they always had

many dead birds around the cell towers and it led him to understand that these towers are dangerous and tried to put them away from neighborhoods. Then he told me that he agrees with me that 5G is the worst also because the towers will be installed in close proximity.

**Appendix 28: Dept. Of Interior: Cell Towers Affects Migration of Birds; FCC Guidelines Obsolete**

**US Department of Interior (2014) – Letter to the National Telecommunications and Information Administration**

**Explanation:** Admissions by a government agency that the FCC thermal guidelines are obsolete. The 2014 Letter from the U.S. Department of Interior states that FCC thermal standards are 30 years out of date and blames cell phone towers for problems with bird migrations. *"The electromagnetic radiation standards used by the ...(FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today"*

**Part 5: The FCC is a Wireless Industry Captured Agency**

**Appendix 29: Harvard University Center for Ethics (2015) - Captured Agency: How the FCC is Dominated by the Industries It Presumably Regulates.**

**Explanation:** A report by Harvard University Center for Ethics shows how industry is controlling the FCC. There is a chapter dedicated to the wireless industry control of the FCC and how it gets what it wants from the FCC while sacrificing the public health and interests. It also discusses the revolving door reality and conflict of interests. For example - Tom Wheeler was the head of the CTIA (the wireless industry lobby association) for 14 years prior to becoming the Chairman of the FCC. The current head of the FCC, Ajit Pai, is a former Verizon attorney. The current head of the CTIA was previously an FCC Commissioner. *A summary of the report about the wireless industry control of the FCC.*

**Appendix 30: Synopsis of Objections of FCC Guidelines by the Health Regulating Agencies EPA, FDA, NIOSH and OSHA**

**Explanation:** In 1993, when the FCC wanted to adopt "safety" guidelines for wireless radiation it opened a rulemaking docket and suggested to adopt the IEEE guidelines. EPA, FDA, NIOSH and OSHA objected to FCC's adoption of IEEE guidelines. In their letters to the FCC from 1993, all four agencies criticized the guidelines on the following grounds (Appendix 30 is a synopsis of the letters and Full letters are in our possession). The IEEE is an engineering organization and no medical professionals were involved in setting the guidelines; IEEE guidelines ignore studies that found health effects at non-thermal levels. Specifically, IEEE guidelines ignore human epidemiological data, the effects of long-term chronic exposure and ignore established effects of pulsed modulation. In addition, these

guidelines do not provide for traditional programs used in regulating toxins, such as pre-market testing, post-marketing surveillance, medical training, etc. Nevertheless and despite thousands of more studies and the epidemic of sickness 22 years later - these obsolete guidelines are in effect. In 2012 the GAO requested that the FCC review its guidelines. In 2013 it opened a docket. Over 900 of the docket submissions demanded changes to the guidelines. Nevertheless and despite the NTP study, the FCC still did not complete its review, and has been fast-tracking 5G and removing regulation.

## **Part 6: Evidence of Fraud by the Wireless Industry – Admission of Harms**

### **Appendix 31: Patent Application By a Cell Phone Company – Admitting Wireless Causes DNA Damage & Cancer**

**Swisscom (2004) - Patent Application in the U.S. for a router with less radiation because wireless radiation is harmful – cause DNA damage and cancer.**

**Explanation:** In 2004 a patent application was submitted in the US for a safer Wi-Fi router. The application was submitted by Swisscom which is a Swiss-government-owned cell phone company (51%). Swisscom submitted an application for a patent that reduces radiation because wireless radiation is harmful. In the application, Swisscom admits that non-thermal microwave harm, including DNA damage and increased cancer risk can happen. *"It has been possible to show that mobile radio radiation can cause damage to genetic material, in particular to human white blood cells, whereby both the DNA itself is damaged and the number of chromosomes changed. This mutation can consequently lead to increase cancer risk"*. The application is admission that there are non-thermal effects from wireless radiation and that DNA damage and cancer are proven.

## **Part 7: Courts' Recognition of Wireless Radiation Harms**

### **Appendix 32: Recognition of Microwave Sickness/Electro-Sensitivity**

**NY Court of Appeals Recognizes Microwave Sickness and Non-Thermal Harms (1982) - *In the Matter of the Claim of Antoinette Yannon v. New York Telephone Company***

**Explanation:** The Appellate Division of the Supreme Court of the State of New York ruled that a former antenna worker has developed "microwave sickness" (the older name of electro-sensitivity) from working with microwave antennas. The court stated that even though the radiation levels may have been lower than what is regarded as "safe" (thermal levels), sufficient evidence was provided to support the conclusion that such levels were the cause of the plaintiff's illness.

**Appendix 33: Recognition of Brain Tumors – Glioblastoma and Acoustic Neuroma from Cell Phone**

**2012 Italian High Court Decision (2012) – Mobile Phone and Brain**

**Tumor Explanation:** In 2012, the Italian Supreme Court acknowledged that a cell phone provided by a plaintiff's employer caused him to get a brain tumor. It was Professor Lennart Hardell, MD PhD the world's leading scientist on the correlation between wireless radiation and cancer whose epidemiological studies are the basis for the WHO classification of wireless radiation in 2012 as a possible carcinogen. It was Hardell's quality studies and testimony to the Italian Supreme Court that convinced the court that causation was established and the evidence alleging no causation is biased by industry funding and scientifically flawed.

**2017 Italian Court Decision that Wireless Radiation is Causing Acoustic Neuroma -**

In 2017 a "Telecom Italia" employee has been awarded monthly social security payments following a court's ruling that his **acoustic neuroma brain tumor** (tumor in the nerve in the ear) was caused by improper use of a company-issued cellphone. This is the second case in Italy in which the courts found causation. Just as with the previous case, the court refused to accept into evidence studies that were funded by the telecom industry. Acoustic Neuroma is a Schwannoma type of cancer. The cancers that were found in the NTP were also Schwannoma type – in the heart and in other organs such as the uterus.

**Appendix 34: Legal Terrorism By The Wireless Industry To Keep The Public Uninformed Even About Harms Industry Admits**

**SaferEMR.Com (2017) - Berkeley Cell Phone "Right to Know" Ordinance**

**Explanation:** In April 2017, the Ninth Circuit Court of Appeals denied a request by the CTIA (The Wireless Association) for an injunction against Berkeley's cell phone "Right to Know" ordinance. The ordinance requires cell phone retailers to inform prospective customers that carrying a cell phone against the body may cause them to exceed Federal Communications Commission guidelines for exposure to radio-frequency radiation. The Industry has been fighting this warning even though the ordinance merely makes visible to customers the warnings currently included in the small print of all cell phone manuals. The arguments of the industry were based upon the First Amendment and Federal Preemption. The court rejected those arguments stating that the ordinance is in the public's interest as it compliments and reinforces existing federal law and policy. The massive legal effort by CTIA to block the ordinance is indicative of the industry's consistent efforts to prevent the public from having information needed to protect itself from harms that are officially admitted to by the industry and the FCC. This is just another example of



how the industry uses its power and money to prevent consumer warnings and to prevent local government from protecting the health of its residents.

## Additional Resources

### Suggested Movies

- Generation Zapped – An introductory movie to the issue of wireless health effects.
- Microwaves, Science & Lies – A movie about the wireless fraud with focus on the World Health Organization which is essential part of the fraud just as it was with tobacco.
- Resonance – Beings of Frequency (free) – A movie about how wireless is affecting us considering humans are electric beings.
- Take Back Your Power – A movie mainly about wireless "smart" meters fraud and harms.

### Books

- Invisible Rainbow – A History of Electricity and Life – By Arthur Firstenberg
- Overpowered - By Dr. Martin Blank
- Disconnect – The Truth About Cell Phone Radiation, What the Industry Has Done to Hide it and How to Protect Your Family – By Dr. Devra Davis

### Websites

- We Are The Evidence – Advocacy group that represent the many adults and children who have become sick by wireless technology radiation.
- WhatIs5G.info – Cover the various issues associated with 5G including health, environmental, privacy, cyber security, e-waste and others.
- Microwave News – For over 35 years Microwave News has been the leading reporting on the potential health and environmental impacts of electromagnetic fields and radiation.
- Safer EMR - Scientific and policy developments regarding the health effects of electromagnetic radiation exposure by Joel M. Moskowitz, Ph.D. Director Center for Family and Community Health School of Public Health, University of California, Berkeley
- C4ST – Canadians for Safe Technology – organization led by former Microsoft Canada CEO Frank Clegg
- Environmental Health Trust – Organization led by Dr. Devra Davis. It is the leading resource for information and materials for advocacy.
- MichiganSafeTechnology- Coming soon- A Michigan advocacy group working in support of safe technology, public health and resident rights.



## **William S. Bathgate**

*Certifications - PMP, ITIL, COBIT, CISA, CRISC, CISM, CGEIT*

US DOD Top Secret Security Clearance

Bachelors of Sciences EE, Western Illinois

University [bill.bathgate@gmail.com](mailto:bill.bathgate@gmail.com)

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Pinckney, MI 48169

256-570-5434

## **Global Technology Professional**

### **Professional Work History**

#### **2015 - 2018 TATA Consulting, Fiat Chrysler Automotive Account – Current Position**

##### **2015 – 2018 Global Program Manager – Auburn Hills, MI**

Manager of Global Programs for enhancements of systems for MOPAR, Secure Vehicle, U-Connect Radio Systems, Connected Vehicle and Autonomous Vehicles. Reports directly to FCA Director of Systems Planning.

#### **2009 - 2015 Emerson Electric Corporation, Avocent Division**

##### **2009 – 2015 Global Engineering Program Manager, Emerson Corporation, Avocent Div. – Huntsville, AL**

Program Manager of a power distribution products portfolio. Responsible for global engineering development and release of newly developed electrical products engineered in the USA and Germany but built in Mexico and Czech Republic. This product is called MPH and MPH II. This is a computer network controlled high voltage and high amperage load control device engineered for worldwide installations adapted for each local countries either three phase and single phase AC distribution grid. As Program Manager I also provided direction and oversight of product safety testing and certifications, such as UL, CSA, CE, and PSE for product safety compliance in over 100 countries. So far over 1 Million units of the products I developed are in service. This role reported to the Vice President of Engineering of Emerson's Avocent Division.

#### **1995–2009 Hewlett-Packard Co.**

##### **1995–2009 Managing Director, Computer Systems Engineering**

Now this division is called "Keysight Technologies". Developed new automated instrument calibration systems and new circuit designs for oscilloscopes, high precision DC power supplies, EMI & EMC Measurements, Phase Noise, Physical Layer Test Systems, RF & Microwave Test Accessories, Device Current Waveform Analyzers, AC and DC power analyzers. Network analyzers and vector signal analyzers.

#### **1983–1995 IBM Corporation**

##### **1983–1995 IBM Corporation, Electronic Systems Engineer, Systems Division – Armonk, New York**

Developed Mainframe computer CPU, Memory and Input and Output peripherals for S/370 and S/3090 platforms. Part of the design team for the first IBM PC products, responsible for power supplies, main computer circuit boards and Operating Systems integration. Also assigned to NASA in Houston, Cape Canaveral and Marshall space flight centers for launch control and space vehicle telecommunications using high frequency and microwave RF signals.

#### **1977–1983 Textron Corporation**

##### **1977–1983 Textron Corporation, Sundstrand Division, Control Systems Engineer – Rockford, IL**

Developed Electronic Control Systems for control of Aerospace applications generating power for inflight services, control of engine start, elevators, rudder and aileron controls. Subcontractor to Lockheed Martin for enhancements to the flight data recorder (Black Box) improving circuit mountings for improved crash survival.

Developed control systems for off road construction equipment such as cement mixers, combines, bulldozers and high rise cranes.

### **Industry Certifications & Expertise**

Certified Project Management Professional (PMI/PMP)  
Certified in Governance of Enterprise IT (CGEIT)  
Certified in Risk and Information Systems Control (CRISC)  
Certified Information Systems Auditor (CISA)  
Certified Information Security Manager (CISM)  
Certified in Control Objectives of IT (COBIT)  
Certified in Information Systems IT Infrastructure Library (ITIL) for Operations, Design and Configuration

FCC Amateur Extra Class License Holder  
FCC Land Mobile License Holder  
FCC Marine Mobile License Holder

High tech power management systems, UPS and power distribution  
Switched Mode Power Supplies  
Electrical and Electronic hardware engineering  
Computer systems engineering  
Radio Systems design and testing  
High Current and High Voltage switches  
Internet communications using both wired and wireless technologies  
UL, CE (Europe), Africa, Japan, Australia and China product safety certifications  
Cyber encryption and protection of Radio Communications using digital signals  
RFI/EMI mitigation

Hold a US DOD Top Secret Clearance and am an instructor of information security encryption control and compliance to the US Missile Defense Agency, NASA, and US Department of Homeland Security.

Date: May 26, 2018

Subject: Autonomous Car Limitations

From: William S. Bathgate

To: Michigan House Energy Committee

Let me re-introduce myself, I have emailed many members of the committee before and testified in person several times in 2018. I am an electrical engineer and worked for FCA (Chrysler) through January 2018. I am now retired but have a keen interest in this technology and I support autonomous vehicles and keep up to date with my colleagues and changes at FCA. While at FCA I had a key role in the telecommunications systems of autonomous vehicles.

There is a hearing on Tuesday May 29, 2018 regarding the proposed new laws to expedite timelines regarding 5G technologies by removing permitting restrictions. I was informed that the telecoms with a vested interest in this technology has told Michigan legislators that 5G communications will facilitate autonomous vehicle adoption and by adopting 5G Michigan would be a leader in autonomous vehicles.

I need to tell the members of the committee is that 5G is not an essential element of autonomous vehicles. We have many states with these new vehicles operating successfully, including Michigan without 5G in place today. It is illogical to now state the argument that without 5G Michigan will be not be able to have autonomous vehicles. The evidence is just not there.

At FCA we realized that the vehicle has to be entirely controlled by internal systems. Those systems are in vehicle radar, GPS, video technologies and proximity sensors. The concept of having a vehicle controlled by a remote radio signal of any type is very hazardous. Also cell towers and especially 5G antennas are powered by the grid, in Michigan the grid is not impervious to numerous outages and other system failures such as trees obstructing an antenna in the front yard of a home during a storm etc.

Now and in the future 5G cannot provide vehicle position accuracy. 5G antennas will be deployed laterally along a power pole mounting line. In other words a straight line. In order to provide vehicle position accuracy you need at least three signals at least at a 120 degree angle from each other in order to triangulate an accurate position. In addition the broadcast range of a 5G antenna is limited because of the higher frequencies, even if you could place 5G antennas at a 120 degree angle the antenna separation from the vehicle would have to be within 100 feet of each antenna. It is unrealistic to deploy a 5G antenna in this density throughout the state. 5G antennas in a lateral line as currently planned can never achieve positional accuracy. Today GPS signals typically provide between 5 to 7 satellites and is extremely reliable for vehicle position accuracy.

Statements by the telecoms that this will enable high speed internet to remote farms is a fabrication. Do you really think they will deploy the hundreds of thousands of required antennas to service farms? Be realistic, the telecoms have been collecting fees from telephone bills for over a decade intended to fund wide deployment of fiber optic networks to homes and business, that went into their pockets and were never used for the intended purpose.

No development for vehicle control is being pursued relying on 5G technology. The representation by the telecom companies that autonomous vehicles need 5G is a false argument.

Here is what is being pursued

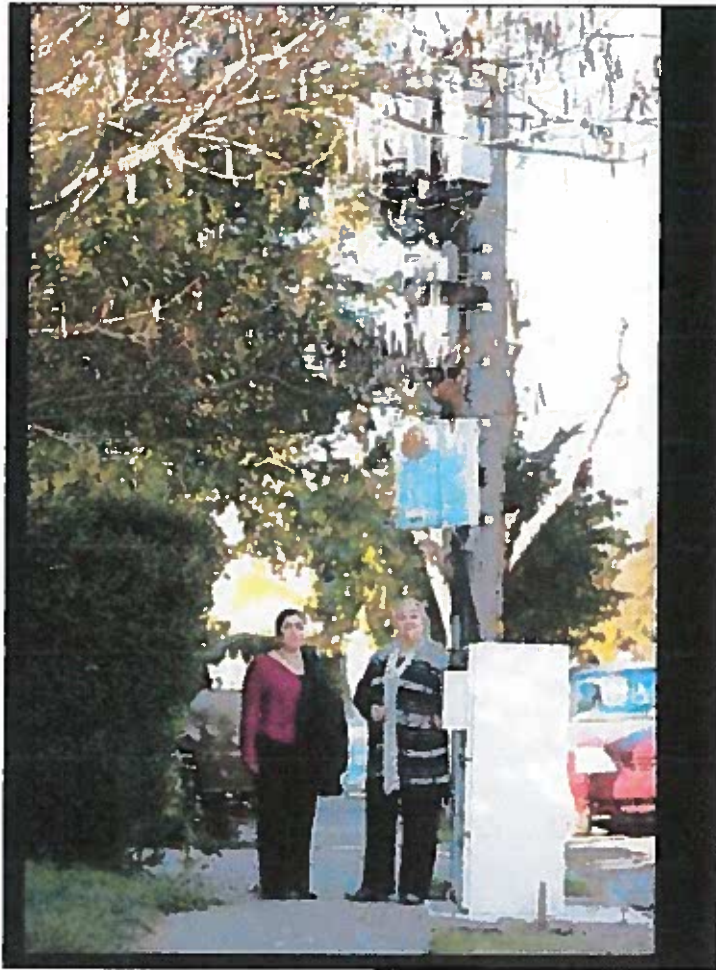
1. Exchange of cloud management information – this is latent data not needed in real time and can be sent by current cell technology such as 4G
2. Sensor data – this is latent data and not needed in real time for vehicle control
3. Multimedia content – this is nice to have, but is being successfully provided today using 4G technology

In summary the argument that 5G is essential for Michigan being the most advanced autonomous vehicle platform is not true. Michigan can be a leader without the massive costs associated with 5G. Permit applications as defined in the bill do not adequately pay for the administrative costs that will be incurred by our townships and city staffs because of the required quick turnaround (sometimes called a shot clock) demanded in the bill. If the local government cannot meet this shot clock timing the telecoms will sue the local government. This will be yet another added costs passed on to taxpayers as an unfunded mandate by state government, because our townships and city will need to add staff to process the millions of antenna site permits. This cost will fall again to the unaware taxpayers in Michigan. The loss of local control over permitting and provisioning of telecom facilities is an unprecedented step in state law. In Ohio over 80 cities have sued the state over this type of action made by their state in a late night insertion into a bill that is the same approach as being attempted here.

It is well known by real estate companies in Michigan that a cell tower adjacent to a home vastly depreciates property values, up to 20% devaluation. With a cell tower at very 2-5 homes the detrimental impact to Michigan property values will be incalculable. Your constituents should be made fully aware of what is coming to their front yard. There has not even been a survey of constituents to get a feel of the public. This is a back door give away to the telecom industry and it will be paid for by public funding at the local level and loss of property values. But if Michigan passes this law it will be too late for anyone to do anything about it.

Your constituents will hold you directly accountable as a betrayal of their trust in you to represent them if you vote for this bill. If you vote for this bill this will be a gift to whatever party candidate that would oppose you in November. The telecom industry is working in their own self-interest, as our representatives your interest should be the citizens of the state and their welfare not whether or not we can download a movie in 30 seconds versus 5 minutes. Your vote on this bill will be adjudicated in November, do you side with the telecom industry over your constituents?

Do you really want this in front of your home with no say or your permission?



*William Bathgate*

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**State:** Michigan

**Name:** Joshua Fisher

**Occupation:** Truck Driver

**Wireless Health Effects:** My name is Joshua Fisher (37), my wife's name is H (32), and my 10 year-old daughter's name is K. We suffer from a condition known to us as Electromagnetic Hypersensitivity or EHS.

In 2006 my wife and I found out we were pregnant with our daughter. In the fall of 2006 we found our home and moved in. In March 2007 our daughter was born. We took K in to get her 6-month vaccinations and she got a terrible fever that lasted for days. It is not uncommon to have a fever after getting vaccinated so we shrugged it off. The fever kept coming back. We had her vaccinated a few more times and she would get so bad that around 2 years old we stopped giving her shots. The fevers would randomly show up for a few hours, at any time of day, and then disappear. We frequently took her to our doctor (and even a children's hospital) and they would always say, "It must be viral," and then send us home with another antibiotic.

About the time she was five, we had to get her shots up to date so she could start school. After she came home she had a fever that lasted for 2 weeks. During this episode, one night, we were sitting in the living room watching TV. Our daughter was sleeping on the couch, her cheeks were glowing cherry red, and she suddenly sat up with a quizzical look on her face. H drew my attention to her and asked her if she was ok. "Mom?" "What baby?" She became visibly frightened, "The house is on fire! Where's my mom! Why's the house on fire!" "I'm right here, what do you need?" H moved toward her and she started screaming, "I want my mom! Leave me alone I want my mom! The house is on fire! Mom help me!" H took her in the bedroom to try and put her to bed. The whole time she kept screaming that she wanted her mom. We grabbed a thermometer and took her temperature, it was 105 F. H couldn't get her to lay down in bed so she picked her up to try comforting her. She was hugging her to her chest when our daughter stopped, looked straight ahead into the closet but off into the distance. A look of fear I've never seen before or since came over her face and she started screaming, "They're coming to get me! LET ME GO! They're gonna get me!" She started kicking and hitting at H to let her go. We desperately needed to get the fever down so I drew a cold bath. H brought her in the bathroom still screaming and pleading and it took the 2 of us to hold her in the cold water for 10 minutes before she finally came out of it.

When she started school, the fevers came with a vengeance. By December of Kindergarten through 2nd grade, she would have a fever every day. We took her to the doctors and they were still saying, "It must be viral." I told her to keep sending her to school so the teachers would have to send her home so they couldn't give us a hard time over it. The school wanted us to hold her back every year because she was barely passing.

Fortunately in 2003 I started driving a truck. I noticed that when I returned to the house I would get a terrible headache but when I went back in the truck I would get an incredible pressure in my head and a debilitating fatigue. When I shut the truck off, I felt better, but when I started it up I got fatigue and head pressure. I began to realize that someone in the house pretty much had a headache most of the time. When I finally came across an article about how wifi causes headaches, I figured, what do we have to lose. I went downstairs and turned off the wifi. It kind of felt like when you pull a splinter out, it still hurts but it feels like the aggravating factor had been removed. I asked H and our daughter if they noticed

anything and they both said something about having a headache but it didn't feel as bad. So we experimented with turning it on and off and realized that it was causing our headaches, however, once the headache was activated, it took time for it to wear off. We also found out that when K got too close to the Wireless Access Point (WAP), her cheeks would turn cherry red and she would start getting a fever! We turned off our WIFI and unplugged all wireless devices.

While researching wifi and headaches, I came across a lot of information on ElectroMagnetic Fields or EMFs. I decided to pick up an EMF meter. A number of times before this I had told my wife that something in our bedroom feels funny when I walk in there, like a pressure or temperature change. From 20 ft. away (in our living room) it just kept going up until I got to the outside wall in our bedroom where it maxed out my meter at over 100 milliGauss. The electrical mast was attached to the wall right outside our bedroom and we were sleeping in 30-100+ mG. We had K sit there and her cheeks instantly turned cherry red and she started getting a fever! We paid \$3000 to have the electrical mast moved off the house and set on a new pole 20ft away.

We turned off the wifi and the headaches went away. We turned off the wireless ADT system and the nightmares went away. We removed the huge EMF from the house and suddenly we were alive again. K rarely gets a fever now, but when she does, we always know why. It doesn't seem like something I should be thankful for, but I am glad I have this sensitivity so I know exactly what K and H are going through and can help them. There are articles popping up on the Internet about people committing suicide because the wifi is affecting them so badly. I believe it.

y.

I bought an RF meter, which measures higher frequencies, like wifi, cordless phones, cell phones and towers. This helped me to realize that the Qualcomm MCP200 being used in commercial trucks was causing the incredible fatigue and head pressure I was feeling in the truck. If I unplug it, my head clears, but when I plug it back in the pressure starts all over. I now know the head pressure is actually brain inflammation which comes with symptoms like headache, fever, incredible fatigue, confusion, delirium, visual disturbances, tremors, spasm, decreased consciousness, stiff neck and seizures. At night I can unplug the QC and I'm able to at least get some decent rest. I have to be very careful about the locations where I sleep now though. One night I slept under a particularly aggressive cell tower and I woke up to my upper body pulsating to the noise the cell tower was making on my RF meter. I had to sleep in a hotel recently while my truck was out of service. The wireless was so strong I had to sleep with my frying pan over my head to reduce the strength of the signal just enough so I could sleep.

**Wireless technology has affected my life:** I will have to stop driving a truck soon, my symptoms are becoming debilitating. I don't know what else I will be able to do because RF is everywhere. The brain inflammation I mentioned earlier pretty much makes you dumb by the definition of the word. Brain function is significantly reduced. At my worst when people spoke to me, all I would hear was noise and couldn't make any words out of it. I could barely back up my truck, even though I used to be exceptional at it, due to lack of depth perception and poor situational awareness. I can't even function in a social situation, especially when exposed to EMF or RF. I can't remember anything to talk about and can't think up anything to talk about.

**Concerns about the future:** I've helped a number of people to realize this problem, and that's without going out of my way to find them. If society doesn't do something to



*Testimony by: Joshua*

address this problem, Microwave Sickness will become a household name, and it will be the epidemic of our time. I remain hopeful, but I fear that if 5G antennas are installed outside every house it will make an already bad situation many times worse. If H and K were to take a trip to the nearest big city, it wrecks their health for just about 24 hours. If that comes to our doorstep, we are going to be in big trouble.

Joshua

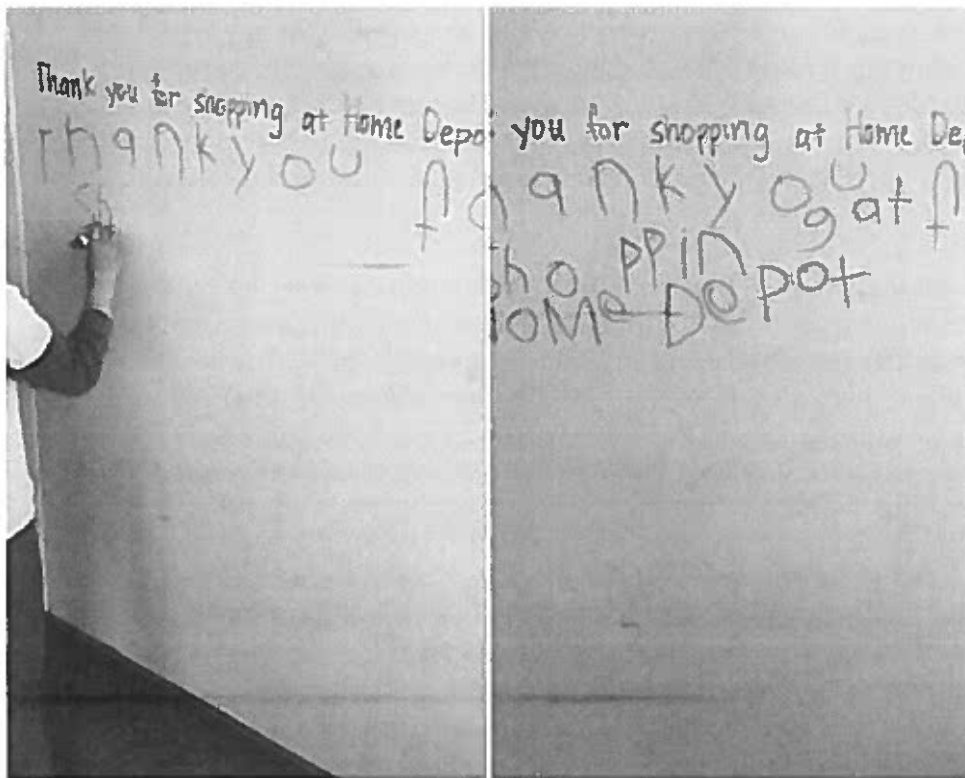




## **Testimony of a Mother of an Autistic Child** **How is Condition Improved Wireless Was Removed**

**From We Are The Evidence:** On May 20<sup>th</sup>, 2018 we saw the following post of a Facebook group called EMF & Autism. In it a mother described how her autistic son started to write after he was removed from environment with wireless. We contacted the mother and she wrote us the full story.

### **The Facebook Post:**



**Mel Bee ▸ Autism and EMF**  
May 18 at 4:45pm

My kid who hates writing...almost 2 months after moving away from smart meters. 30+ wifes. direct neighbor with a hot spot and his progress is astounding. Wouldn't even hold a pen before. Loves writing now. Unreal. EMFs are the worst. Healing is beautiful!!

**Wireless Health Effects:** Five and a half years ago, when my son was 3 we moved from a rural setting in Ohio to a densely packed condo complex in Arvada, Colorado. My son had been diagnosed with autism at age 18 months and had been a pretty easy-going kid until we moved to Colorado. Behaviors got much worse after we moved, but at the time, I just assumed that autism was taking hold and I needed to deal with it.

He went from easy going, to difficult to deal with, fairly quickly. He hated going everywhere, he screamed, hit or bit during the slightest frustrating moments. He woke from his afternoon naps to 2 hours of screaming daily. He started eating every non-food item in the house: exposed drywall corners, window frames, door frames, railings. He ran back-n-forth all day long, every day, slamming into the walls so hard that his hands that he used to brace his impact were rubbed raw and we spent months cleaning bloody fingerprints from the all the surfaces in the house on a daily basis. His sleep went from bad to worse, up for 2-6 hours every night and needing to be completely supervised, even in a contained room with no dangers in it. He would find something that would be unsafe. I had to put bars on the second story windows because he would try to push through the screens, and I put double locks up high and alarms on all the lower story windows and doors. He also started crying EVERY TIME we came home. All of this I attributed to the general worsening of autism.

I have always thought that there was harm in cell phones. I rarely talk on one, I never let my son near one. I also felt that Wi-Fi was an issue, but didn't understand the science until recently. Once when he was 5, we started a speech therapy video program called Gemiini (two i's). You could stream the videos online or download them directly to your iPad for use offline. For the first three weeks, we used the online version, watch the streaming video with Wi-Fi on a laptop. His aggressive behaviors were horrible, escalating so high that family members started asking about it. I decided to change over to the offline version of the speech therapy program, and within 2 days the behaviors were back to baseline.

Over the five years we spent in the condo, he did get better. We did numerous biomedical and dietary interventions to help heal his body. Too many to mention here. He got healthier, and as he got healthier, the behaviors got better. Some things that remained were his hyper running back-n-forth in the condo (although with less force and less blood), his stimming (arm flapping and noise making, not gone, but less), sensory seeking (not gone, but less). Sleep improved, but only after I switched bedrooms from the front (the part of the building with all the smart meters) to the back. He still wasn't a consistent through-the-night sleeper.

About 4 years after living in the condo his health was so much better that he had periods of calm. In the house they were never more than a few minutes at a time. When we were out of the home and in areas of less condensed WiFis and smart meters, he was calmer, up to hours at a time. The second we came home he would start pacing and stimming, sometimes wildly without me able to get his attention at all.



*Testimony by: Mel*

Then my neighbor was robbed and he decided to put a whole house security system in, all based on Wi-Fi. It included Wi-Fi HDTV, a 24/7 video surveillance stream from two cameras and a hotspot. My son's behaviors took a turn for the worse again. When they were home and watching TV the behaviors were noticeably worse.

I called a building biologist to come and do an assessment. He was able to pinpoint the sources of signals precisely from my neighbors. (I knew them and went over to ask to see to confirm. 100% accuracy on location of devices and the direction in which Wi-Fi antennas were pointing.) I painted 3 coats of EMF protective paint on the walls facing my neighbors and my exterior walls, removed all cordless phones, removed my Wi-Fi router (which I had been told by Comcast was off when it wasn't) and replaced it with a corded router, turned offending circuits off at night (indicated by our bodies conducting high levels of electrical signals while they were on).

Things got somewhat better, but not better enough. I started taking my son out for drives and nature walks just to be out of the house. It was so hard to watch him stimming, knowing he was in pain and discomfort in his own body just from being in his own home. (Remember that he used to cry every time we came home for the first couple of years we lived there?)

One of the things that I could not change was the smart meter. It was pointed directly at the bedroom in the front of the house...remember the one my son couldn't ever sleep through the night in? Our condo complex was so condensed that there were 20 smart meters within 15 yards of our condo. There was no way to get away from it.

I decided to do an experiment where we vacationed for 8 days in a house rental that was on 13 acres, no smart meter, no Wi-Fi, no neighbors' Wi-Fi, cell phones off. By the 8<sup>th</sup> day, I had a different child and I knew I needed to move.

It took forever to find a place in the country that I could afford that my son's caretaker would also drive too, but 5 months later I found a place and we moved. Our new house doesn't have a smart meter, they are not in this area yet, it is surrounded by 180 degrees of open space and only 3-5 WiFis show up when you look for them, as opposed to 20ish at the old condo. We also do not have Wi-Fi, we do not have cordless phones, we keep our cell phones off 95% of the time.

I thought the transition would be challenging for him. Our kids like routine and my son can be very OCD about how things are. The first night in the he was fine. Didn't need me to lie down with him to fall asleep and when he woke up the next morning, instead of hearing him stimming and pacing, I heard him playing. The next day we drove back to the condo to get a few last items and when we pulled up to the condo he looked terrified and said, "all done condo, go to new house." I had to repeatedly reassure him that we weren't staying long before he would even get out of the van.

Since moving to what I lovingly call our country home, the following new things have been happening on a regular basis:

1. Pretend play
2. He sings songs from the radio and movies he loves repeatedly, and wants you to sign along with him. (We used to not be able to sing at all due to sound sensitivities and he would often scream for the radio to be turned off.)
3. He has started doing chores to earn money (to buy a ticket to fly on an airplane)
4. He can now make himself breakfast
5. He now WANTS to learn school topics. We homeschool and I always knew when he was in a lesson because he would scream and hit. Now I sometimes don't even know if he is in a lesson and sometimes he says "time to learn"
6. He now WANTS to go to the museums and zoo, etc. He looks at the maps and picks what he wants to see and where he wants to go. NEVER wanted to even go to these places before.
7. He has uttered complete sentences. His normal mode of communication before the move was "all done" He was always all done with something. Never wanted to do anything for long or even at all. Now he wants to sit and help plan his weekly schedule, and will tell you in great detail what he wants to do.
8. He is able to answer, with complete accuracy, the question, "What did you do today?" He only answered questions before that were easy, like do you want bacon or broccoli? I now hear every animal he visited at the zoo, every room he went into at the museum and which were his favorite.
9. He can tell me when he is hurting and where. In the condo, the furthest I got with getting this information out of him was him coming to me and saying "rub it". But he couldn't show me where he hurt.
10. He wants to swing and spin appropriately on his therapy toys. He only paced and jumped in the condo.
11. He initiates games with us now and wants us to play with him instead of him in isolation.
12. He wants to go to every park/playground he sees. We only got him to go to 10% of the parks we tried to go to before.
13. He initiates hugs goodbye/hello, he will respond to hellos from strangers appropriately and just today we had friends over and when they were getting ready to go, he independently packed up some of their stuff to help them.
14. He also likes to hold hands and cuddle with me WAY more now. He will actually drape himself across me often, reach out for my hand on his own, lean on me. This happened so rarely before. Most often if I approached him physically...sat next to him on the couch...he would get up and move.
15. He is starting to explore like a typical child. He looks at things through binoculars, reads books under covers with a flashlight, and suddenly loves to paint.
16. He started liking to practice writing. His handwriting is actually good!! Who knew?!?
17. He is now able to listen to and respond to reasoning. For example, we can go to the park as soon as you clean your room. Or you can be done with dinner as soon as you finish your vegetables. Or if you do chores, you can earn money to ride in a plane.





*Testimony by: Mel*

The gains this young boy has had in the past two months at the new house have been breathtaking. Some days his behavior is so neurotypical that I just sit and cry from the beauty of it. I myself feel much better. I no longer need melatonin to fall asleep. My temperament is much calmer and I am 100% more patient with my son. We will never go back to living with smart meters. I know I will need to move again someday to get away from them again, but am definitely ready to do that for the health of my son.





## **Government Study Establishes: *Clear Evidence* that Wireless Radiation Causes Cancer & DNA Damage**

The results of the \$25 million 14 year study of the National Toxicology Program (NTP) of the National Institute of Environmental Health Sciences (NIEHS), the biggest study of its kind clearly proved wireless radiation is carcinogenic and causes DNA Damage. An external peer review expert panel convened by the NIEHS, confirmed in March 2018, that the findings of the study provide clear evidence of carcinogenic effects; The findings confirm the findings of other studies, leaving no doubt that the Radio Frequency/Microwave Radiation emitted from Wireless devices is harmful; The public must be warned; Nevertheless, political & financial forces are attempting to continue and block the truth from getting to the public

### **The Study Purpose was to Give Final Answer Whether Cell Phones Are Harmful**

In 2000, the federal government decided to fund a study that will give a final answer whether or not cell phones and the radiation they emit – non-thermal levels of Radio-Frequency/ Microwave radiation can cause cancer. The Federal Food & Drug Administration (FDA), commissioned the National Toxicology Program (NTP) of the National Institute of Environmental Health Sciences (NIEHS), to conduct the study. The study was done by exposing male and female mice and rats to non-thermal levels of GSM (2G) and CDMA (3G) modulated signals. This is the biggest study of its kind and it took long as the scientists wanted to design and conduct a perfect study and for that purpose special and expensive chambers for the experiment were built, to ensure the results would be bullet proof.

### **Results Published Following FOIA Request**

Although the scientists had the results already in 2014, they became public only in 2016 following a Freedom of Information Act (FOIA) request submitted by Dr. Louis Slesin from Microwave News. Microwave News has been reporting on the potential health impacts of electromagnetic fields and radiation for 35 years and is widely recognized as an objective source of information on this topic. Dr. Slesin, the editor of Microwave News holds a PhD in Environmental Policy and a Master's from Columbia in Chemical-Physics.

### **NTP 2016 Partial Report: Wireless Causes Cancer & DNA Damage**

Because the FOIA request and an article that was published by Microwave News, the NTP was forced to have a press conference and published a partial report of the findings. It is important to note that the study does not provide new findings but supports the findings of many other studies including US Air Force study.

Dr. Ron Melnik, PhD, Senior Toxicologist and Director of Special Programs in the (NIEHS) said in 2016: ***"The NTP tested the hypothesis that cell phone radiation could not cause health effects and that hypothesis has now been disproved. The experiment has been done and, after extensive reviews, the consensus is that there was a carcinogenic effect"***. In regard to the DNA damage findings Dr. Melnik stated that the results of the study: ***"should put to rest the old argument that RF radiation cannot cause DNA damage"***.

## **The NTP Scientists in 2016: The Public Should Be Warned**

It seemed as if the scientists were relieved that they finally can discuss the findings. Their message was that the study found clear evidence that this radiation is carcinogenic and cause DNA damage and that considering the extensive use **the public should be warned**. The NTP scientists were concerned about the increased risk of schwannoma of the heart and glioma findings and they released a partial report with these results because the same types of tumors found in a number of epidemiological studies of cell phone use among humans.

## **The Efforts to Undermine the Results of the Study**

Following the 2016 conference announcing the Partial Report, the industry and other interested parties have used their money and power to weaken the impact of the results using their money and power with the media. Dr. Joel Moskowitz from Berkeley University published a helpful table ***"Spin Vs. Fact"*** (attached) to help refute the misinformation by the wireless industry and other interested parties.

In February 2018 the NTP published its final report of the findings. Oddly, the final report weakened the conclusions from 2016. There can be no other explanation except that pressure was put on the NTP and NIEHS to downplay the results. One sign that supports the suspicion is that 3 weeks before the scheduled press conference for the final report, the current director of the RF Project Dr. Bucher who led the project after Dr. Melnik retired, was demoted and a new director was brought from the pharmaceutical industry. An article by *Microwave News* ***"What Changed at NTP? Same RF Cancer Data, Different Outlook?"*** provides suggestions as to the forces behind the scenes that were working to get the NTP to downplay its findings. These findings should be a game changer in terms of continued use and proliferation of wireless technology and therefore a threat to the interests of many. While in 2016, What explains this turnaround?

## **2018 NIEHS Expert Panel Confirmed Clear Evidence of Carcinogenic Effect**

On March 28, 2018, the NTP's 2016 (not the 2018's) conclusions were confirmed by an 11 expert panel appointed by the NIEHS. In the NIEHS, after a final report of a study is issued, the NIEHS invites a panel of external experts to conduct a peer review of the report and findings. After 3 days of deliberations in a public hearing, the 11 experts' panel found the NTP study provides clear evidence of carcinogenic effect. The panel conclusion regarding the strength of the evidence in the study were stronger than those in the NTP Final Report from a month earlier and correspond with those of the 2016 report. The experts' panel upgraded 11 of the 2018 classification to higher carcinogenic classifications. A table summarizes the findings in regard to the various cancers is attached.

The panel found clear evidence of tumors in the heart in male rats called Schwannomas. They found the lower level of evidence, "some evidence" that cell phone radiation exposure caused brain cancer in male and female rats and cancer of the adrenal glands in male rats. "Equivocal evidence" of cancer risk was reported in the pituitary, adrenal, and prostate glands and pancreas and liver in male rats and adrenal glands in female rats. Dr. Moskowitz explained that "other increased incidences of tumors were classified as "equivocal evidence of carcinogenic activity" because they failed to display a classic dose-response relationship. However, much of the published research on microwave radiation finds that the likelihood of a health effect does not correspond closely with the dose (or intensity) of the radiation. Rather, the

frequency of the carrier wave and pulsing and modulation of the signals appear to affect the organism's cell signaling processes independent of the intensity of the microwaves."

### **The Ramazinni Institute Study Confirmed the NTP Cancer Findings**

On March 22, 2018 the prestigious Ramazinni Institute published the results of its 6 million euro study. The study confirmed the results of the NTP study, showing Schwanoma of the heart. While the NTP used levels of radiation which are equivalent to the levels emitted by cell phones, the Ramazinni study used levels of radiation which were 15 to 6000 times lower and resemble the levels to which the population is exposed from cell towers.

### **More Important than Cancer: NTP Proved Wireless Causes DNA Damage**

While the focus is on the cancer findings, **the more important finding is that this radiation is causing DNA damage** as damage to the DNA can cause various adverse effects including cancer. Further, the main alleged difference between ionizing to non-ionizing radiation is that while ionizing radiation can break the DNA, non-ionizing radiation cannot. This assumption was proven false already over 20 years ago with the study of Prof. Henri Lai, a study that Motorola wrote a memo that it should be "war gamed". Since then, 26/31 studies that were done on DNA damage from wireless radiation, showed that it does break the DNA and 6/7 of the human studies showed it breaks the DNA. The NTP study confirmed the findings of these previous studies.

### **Cancer Findings Even Stronger if NTP analyzes the overall tumor risk**

Dr. Joel Moskowitz from Berkeley has been covering the issue of wireless harms on his website - SaferEMR.com. He questioned the omission of the NTP to assess an overall tumor risk analysis that is, the risk of an animal developing any type of tumor due to cell phone radiation exposure. His rationale is: "While it is useful to examine what happened to the trees in the forest in this experiment (e.g., the increased risk of a specific tumor developing in male rats from GSM exposure), it is essential to examine what happened to the forest (e.g., the overall risk of a male rat developing a malignant tumor from cell phone radiation exposure)."

He provides several strong justifications for conducting this analysis: "First, a 5-year, \$5 million Air Force study found low incidences of various types of tumors in male rats exposed to microwave radiation. In that study, the exposed rats were three times more likely to get cancer than the control rats. The study employed much lower intensity microwave radiation than the NTP studies. Second, early toxicology research on the effects of tobacco found low incidences of many types of tumors among animals exposed to tobacco smoke. Scientists dismissed this evidence as they assumed an agent could not cause cancer in different types of tissue. History later proved them wrong. Third, numerous biologic studies have found that exposure to low-intensity radiofrequency radiation increases oxidative stress causing generation of free radicals, stress proteins, and DNA damage in many different types of cells. "

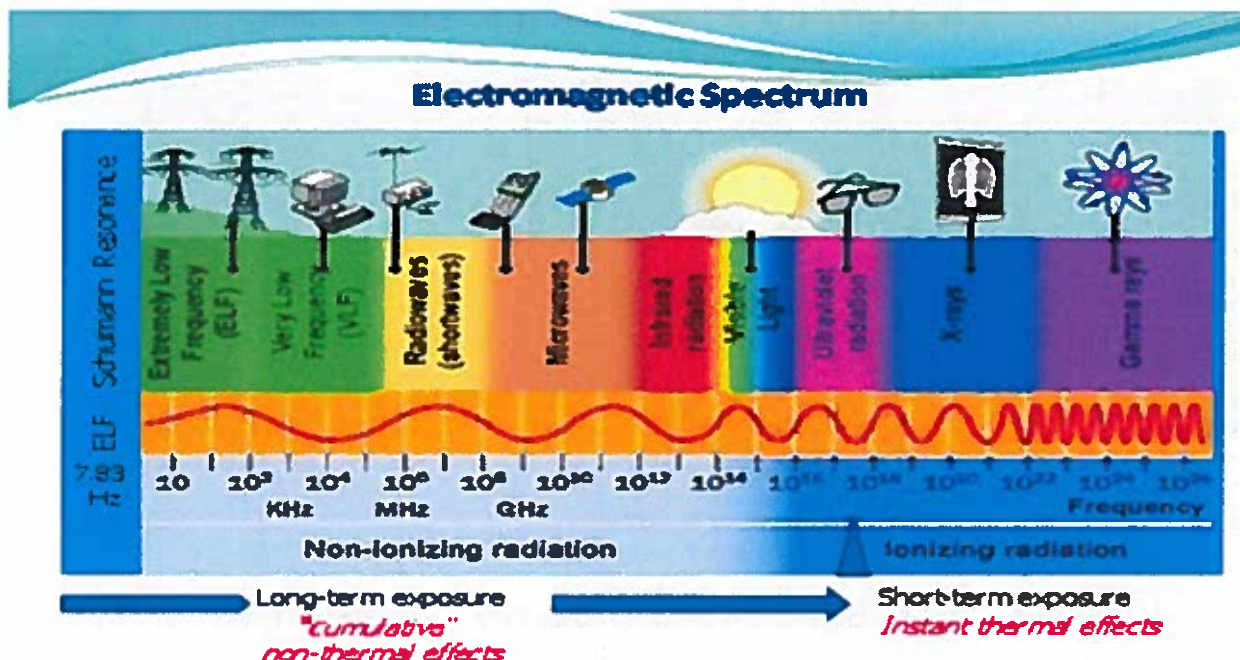
#### **Further Recommended Reading:**

SaferEMR.com - [National Toxicology Program Finds Cell Phone Radiation Causes Cancer](#)

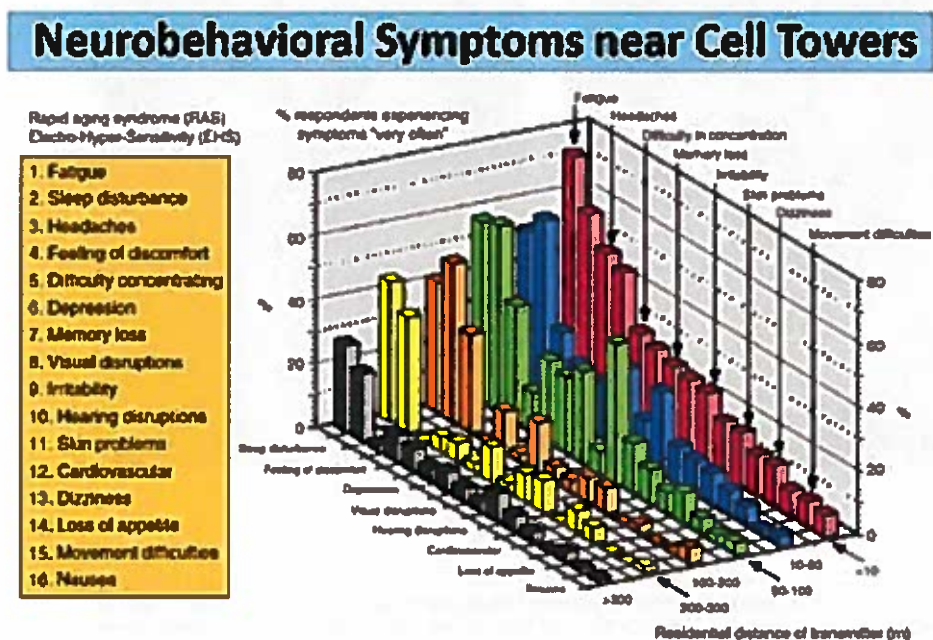
MicrowaveNews.com -



## Image 1: The Electromagnetic Spectrum



## Image 2: Neurobehavioral Symptoms Near Cell Towers (Santini 2002)



Work of Santini et al (France): Pathol Biol. 2002;50:S369-73.



### Image 3: Leakage of the Blood Brain Barrier From Microwave Radiation (Salford et al 2008)

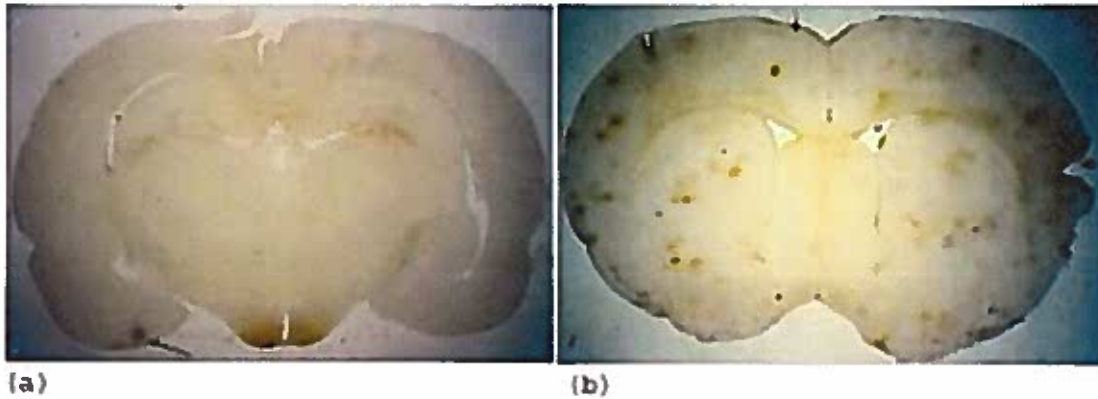
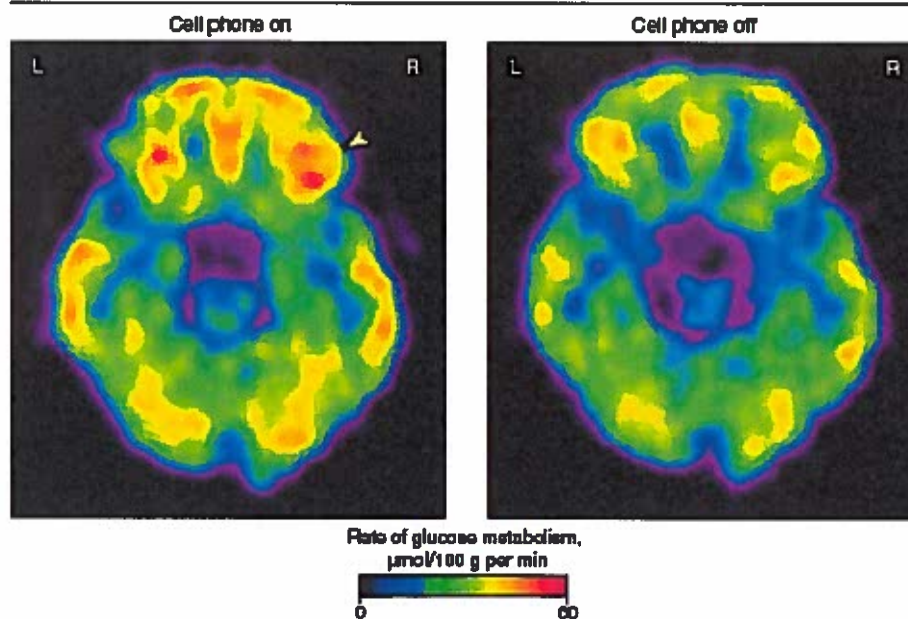


Figure 1

### Image 4: Increased Brain Glucose Metabolism In Humans from Cell Phones (Volkow 2011)

**Figure 2. Brain Glucose Metabolic Images Showing Axial Planes at the Level of the Orbitofrontal Cortex**



Images are from a single participant representative of the study population. Glucose metabolism in right orbitofrontal cortex (arrowhead) was higher for the "on" than for the "off" condition (see "Methods" for description of conditions).



**Image 5: Penetration of Radiation from Cell Phone  
to the Brain\_(Gandhi 1996)**



